

A CITY FOR ALL LONDONERS

Environment Workshop
17th November 2016, 9.30 – 13.00

Zero Carbon and keeping within 1.5 degrees Table 1 Session 1

Facilitator comments in bold

Respondents in regular text

These notes are a summary of the conversation

Session 1, Table 1

Brooke Flanagan (Facilitator)

Joseph Cosier, Energy Saving Trust

Vassia Paloumbi, Bank of England

Tom Harrison, Sainsbury Family Charitable Trusts and Ashden Awards

Clare Murray, Levit Bernstein

Costanza Poggi, Green Alliance

David Lewis, London Forum of Amenity and Civic Societies

Joanne Wade, Association for the Conservation of Energy

Mark Jenkinson, Siemens

Doug McNab, Southwark Council

Any initial thoughts or feedback on what we've heard already or on the document on the table?

It is a very welcome notion that the environment strategy will proceed with zero carbon emissions as a priority.

I came to the transport session last Thursday. That policy is going up to 2041. This is going to 2050. Why the difference?

I'm not sure, but I can look into it. I suspect they'll be brought into alignment.

The idea that KPIs can change is very interesting. The idea that the ambition can change yearly is very interesting.

What are the interim targets? What milestones are you thinking in terms of CO2?

We currently have an interim target of 60 percent by 2025. We are going back to modelling work to recast towards zero carbon by 2050. Other modelling, for the London Energy Planning Tool, was based on achieving an 80 percent emissions

reduction by 2050; need to look to sectoral projections. We are interested in appropriate interim targets or milestones.

What are the timings around this?

We are looking at what 1.5 degrees means in terms of the contribution of cities. Zero carbon is a manifesto commitment.

How are your targets aligning with government objectives?

They are not currently. We are aligned with many other cities who have signed up to this ambition, but government's target is still 80 percent by 2050.

Do cities need to do more than the national target? Does London have to run faster than UK targets?

A lot of emissions are coming from cities. The GLA is taking more of a leadership role.

The method of electricity generation affects the calculations on whether you're achieving zero carbon.

We can do what we can do within the boundaries of London. National decarbonisation is still a very important process.

Let's turn the discussion towards challenges and opportunities. A lot is outside our direct/spatial control. Any thoughts on challenges and opportunities presented by zero carbon?

A discussion needs to be had in terms of densities, especially in terms of housing schemes. A discussion is needed about how best to facilitate energy reduction, how to fix the problems with fabric in order to push the boundaries for the built environment without the target being so onerous. As architects, we are particularly interested in this issue. Zero carbon targets push everyone, but they may not be best for the buildings. How can we shape the targets for buildings? People switch off if targets are too high.

London having a zero carbon target shows that we are at the forefront.

Challenge to built environment is not to focus too much on new builds.

The big problem is the existing housing stock and the rate of progress.

We have huge opportunities in terms of the private rental sector. Could we utilise that opportunity?

Do it via enforcement and landlord accreditation schemes. Lewisham have a borough-wide accreditation scheme – there's a role for local authorities and the Mayor. It would be good to focus on setting level of ambition role for GLA. We are a world-class city and we want people to be attracted to live here. We have an important ambition role.

There are tensions between targets and what is delivered for buildings. The current London Plan has a strong policy regarding communal heating. At a smaller, more significant, scale that solution is not cost effective. The GLA has a threshold for CHP, but we should have specific

guidance on where communal heating is effective. It's hitting occupiers with large running costs.

Now is a good time to be further developing and providing an evidence base to stand up to scrutiny.

We're working on a demonstration project revolving around a sharing heat project and providing heat for 20,000 homes. Most tenants don't pay for heat, so they don't manage their behaviour accordingly. They have the heating on and the windows open, for example.

This returns us to the Mayor's leadership role in terms of soft power. The Mayor can go further.

Ministers appear to be convinced of the need to recast private rented sector minimum energy performance regulations but have not agreed the finer details.

It is worth a push from the Mayor. We have a good evidence base from around London.

Mayoral elections are coming up in other cities. More cities mean more Mayors applying pressure, which could be very important for zero carbon.

We need a clear strategy for where carbon offset money goes. Look at zero carbon payments and consider applying them to old stock.

With new interpretation of zero carbon a lot of boroughs are refreshing their project lists, but now we're anticipating more funding coming in. There are challenges around state aid and what you can support. Some have said that all that money should be pooled at a London level to get biggest carbon saving for the buck. Politically, boroughs would rather spend it locally, as it's a sweetener for residents: there's a payback for existing buildings.

What guidelines are there for boroughs?

Various challenges to steer around, and issues with what is defined as infrastructure and what is not. If it's defined as infrastructure, you can only pool five contributions. Various complexities. Islington have the largest offset pot as they have been doing it for a long time. They prioritise retrofit works: lighting, insulation, social housing, upgrading heating systems on housing estates. They're the majority of issues that Southwark are targeting. If it's not infrastructure it's retrofit – it makes it easier.

One thing missing from A City for All Londoners is looking at other sources of money: pension funds etc. As part of zero carbon, we need to shift pension funds towards renewables. Where do you invest with that pension money?

Good opportunity to turn to the issue of financing more broadly. I would expect there will be some restrictions on what can be invested.

I know we've discounted new build, but the housing imperative in terms of increasing the density of suburban areas ought to be recognised – could be a major opportunity for large improvements for energy performance. That is a direction in which insurance companies and pension funds have been pointed – providing new housing.

Do you mean building more and replacing old housing? That has embedded carbon issues.

There are problems, but there are inter-war suburbs with regeneration issues. If we think about what the strategy might be and the timescale, there could be tremendous synergy between housing and environment policy.

Back on targets, we need to be clear about what we're measuring when we talk about carbon targets. There is a huge performance gap between 'as designed' and how it performs in practice. Key issue GLA could push on. Could be reporting stats at London level. Emissions could be three, four times greater. Zero Carbon Hub did a lot of research on gap in emissions. There are concerns about the robustness of checks. Enforcement is next to nothing.

The schemes that we've measured include flats the same size and orientation. Inefficiencies emerged in terms of human behaviour, but also many at design level.

There are restrictions at a national level, but ideally there would be a policy for reporting and testing. There should be a requirement to share data to enable researchers to find how to plug gaps. We are not getting that learning.

Should we mandate that that be public data?

The requirements for carbon are based on paper-based checks. If there was something for policy that meant we could achieve reductions, not just a number on a piece of paper...

Compare that with the transparency of data with TfL. We need open energy data that others can tap into; they could assess it and outbid.

We should turn our attention to the roll-out of smart meters in commercial and private sectors.

In terms of transparency of data, does anyone take notice or understand it?

When I was at Islington we tried to develop a new performance strategy, which we've heard anecdotally has improved the attitude of developers. It would be great if the GLA explored that.

Civil society should have access to that. Voluntary sector is being massively underutilised.

Back to finance, we should be investing in generating income for Londoners. Many companies are set to lower carbon price. Decide your own carbon price and treat every investment decision with that in mind; calculate cost benefit analysis on your prices. Certain decisions become more expensive in a carbon-restrained world, but may not actually be more expensive. When you evaluate price of new build... Leading companies want to set own carbon prices. Healthy streets auditing process will include the cost of health impacts to streets. Not real costs, saved costs. You end up investing in longer-term saving. Healthy streets strategy looks at cost involved in emissions, pollution. If a scheme produces pollution, it should cost more. A limited model that could be taken across could be beneficial.

Any more thoughts on costs? We are looking at retrofit for homes and all buildings.

The pay as you save model has merit. Scotland is doing zero interest loan scheme.

Where does low-cost capital come from? Zero interest and low interest loans involve level of capital. Where do we access that capital?

Municipal loans.

Carbon offset loans?

That is a small level of capital in terms of the billions needed to retrofit.

Siemens have different levers we are experimenting with. Copenhagen has carbon neutrality target, which it was going to miss. They needed to motivate and incentivise the commercial centre. We have buildings data for London. We have done initial analysis for London. Biggest emitter of CO2 is the retail sector. Ask the retail sector. Close the Door campaign. Get the retail sector to invest.

What's the incentive?

Need a big stick. Get Londoners to boycott.

The Mayor doesn't have those direct powers.

Who are the main emitters?

Is that around more of a regulatory framework?

I think we are underplaying problems in cooling. Are they opening doors to let heat in or because they actually need to cool down? Nine Elms opportunity area, the energy opportunities are for mixed use developments. The energy load will be cooling rather than heating.

That is the other challenge. How much PV do you need?

Interesting link with zero carbon in terms of resilience too.

So it needs to be a more integrated approach.

London Plan could do better on overheating by being clear on modelling requirements for major developments. Cooling hierarchy could be more specific to test overheating risk.

That is a real challenge for GLA as it's not set out nationally.

The problem architects face, in terms of modelling, are tweaks such as shutting the curtains to stop overheating.

The other question is around the role of other organisations. What needs to happen and what is not within the powers of the Mayor? Who are the other key players in helping to deliver zero carbon and how do we bring them into the tent? Retailers have been mentioned. How would you define the local authority role?

The challenge is the pressures we're under in current concepts. Planning levers are powerful. Unless there's real political commitment around rolling out decentralised energy, it's always going to be difficult to get wider, ambitious programmes off the ground. Islington have done great work around decentralised energy, but they had EU funding. It is challenging, but there is a role for GLA to identify opportunities and communicate them to local councillors.

Missing consistency around London. Every borough has different priorities. It's managing 33 cities and it's very difficult. The minute administration changed, everything changed at council level.

When you have democratic institutions at that level you have a broader question about governance.

Are you talking to City of London finance guys, as they have a global commitment? We are involved in impact investing, as in social impact – London is a heart of impact. Crowdfunding is a way of doing consultation. Put money behind stuff I'm backing politically. It's a small change.

We've got to get the 8.8 million people engaged. All have to play our part. Ask people, schools, "How do we save money?" We all need to engage everyone.

Any other suggestions to engage people?

School unions are disastrous, because they believe school teachers have to have cars. Labour city has to work with the unions towards 2050 target.

Got to explain what zero carbon means.

Make it practical. What's your home going to look like? This is what it will feel like. Give people a journey.

People who make Attenborough's virtual reality TV programmes are worth talking to. There's a lot of interest in visioning in schools what London will look like. I can introduce you to filmmakers. If everyone pitches into the vision of what London looks like...

Embedded carbon should be spoken about as buildings become more effective in operation.

Zero carbon and keeping within 1.5 degrees

Table 1 Session 2

Session 2, Table 1

Brooke Flanagan (Facilitator)

John Luckhurst, London Borough of Bexley
Linda Baird, London Borough of Barking & Dagenham
Alice Collier, RSPB
Joe Baker, Haringey Council
Richard Templer, Imperial College London
Abdul Khan, Tower Hamlets Council
Steve Smith, Committee on Climate Change
Afsheen Rashid, Community Energy England
Sophie Neuburg, Friends of the Earth
Robin Brown, Just Space

Launching into zero carbon discussion. What are the biggest challenges and opportunities? Do you have any thoughts on what that might mean for London's role in keeping within 1.5 degrees?

Is the view that London reaching zero carbon in 2050 is consistent with 1.5 degrees?

Zero carbon was a manifesto commitment, along with several other cities in UK and beyond.

The Committee on Climate Change have recommended that the UK needs to do it by 2040.

Cities are broadly committed to two degrees.

We are working towards seeing whether 1.5 degrees is possible globally.

It's about London's role in the global push towards keeping within 1.5 degrees.

We need to work towards 1.5, though, playing London's part in the commitment towards 1.5. It's our job to enforce this commitment. Clean air policy deals not only with clean air but carbon. Well-insulated homes should be considered a social responsibility. In terms of the economy, it's about the financial industry and whether we want them to be playing their part.

I'd raise the point about making a real commitment. Page 59 of the booklet mentions the policy of phasing out diesel buses. Should be a solid commitment with no wiggle room. Should only be buying green buses, not just phasing out diesel.

If you are going to take the ambitious route, think about what humans are doing. We are in a car, facing a brick wall, taking our foot off the accelerator and hoping not to hit the wall. We need a brake. This brake should be taking CO₂ out of the atmosphere. We have no proof yet; my colleagues have not finished their work. Given IPCC report, we have to think about how we can take CO₂ out of the atmosphere, for example re keeping cool.

Re higher emissions and the consumption of electricity, the numbers we've crunched indicate that the manufacturing process will bring down emissions. There is a bigger carbon footprint in building an electric car, but over the course of its lifetime the impact is lower.

Dispute that: there are lots of positives, but at this time electric cars are not the ideal without decarbonising electricity.

22 percent of London's CO2 emissions are from transport. Let's consider the remaining 78 percent from our buildings.

Decarbonisation needs to happen in homes.

The Mayor mentioned using waste heat from the underground. How much demand could that meet?

It depends on where things are located, where waste heat is needed, where the demand is.

Crossrail was designed to capture waste heat, but it was value engineered out. TfL had major issues with slowing down the heat dispersal. In the event of a fire it causes other issues. Crossrail 2 could be designed to help with these challenges. Deep underground lines could be useful, not shallow lines.

Waste heat tax? If you drop energy, you tax it. Unlock the capture of that heat for other purposes.

Conflicts could arise from demand response. Demand response is ideally about finding other uses. Excessive surplus, eg over-refrigeration, is technically waste, as we should be refrigerating as little as possible.

That is where storage comes in.

Alongside the report we in the CCC did on Paris, we did a report on heat strategy for the UK. It flagged lots of solutions for off-gas grids, but tricky thing is urban areas. Retrofit of reversible heat pumps is being considered. Need to focus on future: biogas one option, convert it to hydrogen. Tricky, but there could be London boroughs prepared to trial that.

Hydrogen becomes a carrier for heat.

We looked at hydrogen and storage, linked with carbon capture and storage. Where do you get your hydrogen from? Heat is the tricky one. For zero by 2050 strategy, we need to focus on this.

Hydrogen has a role to play in balancing the system. There are times when we have far more supply. Hydrogen could be used to offset storage.

Doesn't just have to be hydrogen.

Or natural gas.

Using natural gas transformations is an interesting thing to be considered.

We need pilots and the testing of new technology. Solar panels and maximising roof space are valuable resources. Start with that and integrate it with new storage and innovative systems.

Picking up on zero emissions in 2050, the current London Plan has firm policy on CO2 reduction, but the road map tapers out towards the end. For the 2030s, there's no delivery strategy for achieving lower emissions. What are the chances that a roadmap for zero carbon by 2050 will not be the same disappointment, that we will be arguing about realistic possibilities? My provocation to you, given the current London Plan, is will we not have more of the same?

We want a detailed roadmap. I like the CCC report to Parliament – shows what we need to focus on. A reporting structure could be useful. To do a CCC report every five or ten years helps keep on target. Need to start now with easy wins and do them first.

OPDC are trying to encourage more retrofitting. Why are we obsessed with retrofit? We have areas of London with great regeneration programmes. Could balance difficulty of old housing stock against opportunity areas. Opportunity areas should be given specific requirements as CO2 sponges for London.

Back to zero carbon aims for new builds. No new build should be carbon neutral; all should be carbon zero.

Developers and agencies need to work together to enforce that.

We need active removal technologies, whether aiming for 1.5 or 2 degrees. On buildings, there are interesting options eg use of wood in construction. People also working on aggregates that suppress CO2 – the materials themselves could be used for carbon removal.

The real pushback is on the price of zero carbon construction. Construction industry is deeply stuck in its ways.

We stopped building London out of wood because of the Great Fire, but we've not returned to the idea with new technology.

Are we talking about embedded or operational carbon?

Does that include Heathrow?

The Mayor is clear on not wanting the new runway.

There is guidance for businesses on tier 1, 2 and 3 reporting. Interesting to know the conversation.

Back to zero carbon homes and cost of carbon. GLA chose medium cost. This implies that the cost of carbon is so low that it needs policy to offset a real cost. Connect funding at local level. One particular borough has collected money. It was not able to spend it in five years, so has to give it back.

There is a difficulty with being strong in London. We don't want to be so strong that we are limiting. We should encourage national level to meet London level. Otherwise, people end up building just outside London boundary.

The insulation of a Victorian home means reduction of living space.

There are definite implications around lack of space caused by bulky insulation. There are no thin insulation materials. Low-income people have the major problem in that they are living in damp conditions. Need insulation schemes that are sympathetic to how they're being used. They cost money, and government needs to fund it.

London needs to get fair share of government funding for energy efficiency. That would help us to have a self-financing system. We have done a huge retrofit in Haringey, but the average cost to get to a user-friendly level was too expensive.

A lot of stuff in the way in terms of this.

Aren't there plans for Energy for London to use supply companies?

Any examples?

Need to get structure right.

Carbon bonds for residents that are not extortionate. The investors then feel that they are invested in carbon infrastructure and that generates a wealth of return. Enough well-meaning people who consider the social agenda.

Huge mobilising force if you think you're part of the solution and making money.

Take it further than bonds.

Moral abundance at our disposal.

Through community we have raised huge amounts of money from community share offers.

Are people who engage with this mainly home owners rather than renters?

Community schemes work as a collective, community asset. Benefit regardless of whether tenant or owner.

So many people in a big city, it should be so easy. Out in the country, in a village, it's harder, because you don't have economy of scale.

Development time is eaten up by landowners not wanting to open up assets such as rooftops. Huge progression available.

If roofs in the private sector were hard to get on board, the Mayor could make it difficult for them to say no.

You can do it independently or as part of a community scheme. Solar won't meet all London needs but it's a start.

Timelines are really pressing. Have to deliver on time to hit target.

London Energy Plan that was launched earlier this year has a big gap in it. Number of scenarios predicated on retrofitting. We have to do that, but also have to couple it with local energy production.

Solar in London is important in the wider picture. London keeping going and meeting demand is reliant on solar power as there's lot of roof space.

The important point under all these scenarios is that you can't get all energy produced in London. We will rely on others outside London.

We are a city, so we will need to bring things in from outside. More than local communities, it may be big engineering.

Technology is irrelevant. We are talking about solar today, which is easy and doable.

Big engineering projects require a different distribution programme.

We're focusing too much on solar. The retrofit is the deeper demand. Getting rid of standby solutions is where to focus now.

People are not interested in energy. Solar panels get them interested. Also looking at retrofit simultaneously. Investing, incubating disruptive innovation to highlight what can be done and scale it.

Do we need to change how the infrastructure works in getting stuff in and out of London? Do people need their own car? People have their cars parked all the time. You don't buy a car any more, you use one from a car club. This makes it more beneficial to walk and cycle.

There will always be cars on the road, so we need to make them zero carbon.

How do we get goods in? Does TfL influence strategies around that? Do infrastructures consider approach for getting goods in via routes other than HGVs on the road?

We do need to discourage commuting. Get people to move out, but not with the intention of commuting in. Bad environment is causing long-distance travelling.

People can't afford to live in London.

Systemic integration is needed. Start thinking about cooling buildings using evaporation – pump grey water to roof to evaporate, reduce load on drains. But photovoltaics on roof reduce the area available for other schemes. Have to systemically understand what you want to achieve. In plans for low/zero carbon London, integrating the systems you've got is very important. My colleagues at Imperial have said you can make huge savings by improving the way the systems works. At the risk of causing offence, we are talking in naive and optimistic ways about what people will take on board. We are believers, but the realities get in the way. The GLA should run at that level.

How do we combat that? Given the scale of the challenge and the time restrictions, getting individual houses to sign up for retrofit and PV versus the time it takes to build up the supply chain, how do you make it happen?

People have good intentions, but won't do it themselves. You have time and systemic planning. The way you can do things for people is to look at systemic integration. Bring in the businesses.

Create a situation to allow initiatives to flourish. Combat the barriers that exist to community owned energy. There is a disconnect in the timeline between environmental strategy and the London Plan. A lot of the actions to get this done by 2050 depend on the London Plan.

The strategy needs to inform the plan, but you're anticipating strategic problems without a roadmap.

You need to set up an engineering framework. Regulation policies to drive the cities towards action. Get it down on paper.

We also need a key monitoring regime. The problem with the previous London Plan was that there was little scrutiny.

We need a set of indicators.

We also need regular updates.

Original legislation for the Mayor stipulated that there was to be a reporting mechanism, but that seems to have dropped out. I would call for an annual state of the environment report.

I agree that a systemic approach is worth considering. I support focus to get solar done, but we don't want to lose important connections. For example, green roof and solar can work together without confusing people. Can maximise the pros from that collaboration from the start.

If you're talking about retrofit in existing homes, you also need to think about low carbon, overheating, water efficiency, integrated framework.

Instead of retrofit targeted on energy, maybe it would be more ambitious to retrofit for other aims as well.

This comes back to what do you put in place regarding time restraints. Insulation is difficult enough.

Research shows people able and prepared to pay about a third of the costs for insulation. You need to be looking for a self-financed model. The green deal works in practice. Pay as you save doesn't work; the bureaucracy becomes so onerous and nightmarish. Easier model – equity release. One transaction rather than multiple.

That's a mechanism at house-owner level. How do you unlock the capital? Looking at hundreds of billions.

Companies are doing carbon offsetting – could harness that.

Current government schemes are not enough. May is saying, "Let's invest in infrastructure budget." Mayor has a lot of political power. Need to keep on with the narrative from the campaign.

By improving energy efficiency of buildings you are avoiding costs. Can we talk to the City and ask them how to capitalise on that? They've got more than enough money. Our pension funds need to decarbonise. Is this a manoeuvre we can make?

People in fuel poverty – money comes back in terms of NHS, young people's outcomes. There's a whole sector that needs to evolve. It's important that we keep within 1.5 degrees, but only worth it if affects people on lowest incomes.

I have to feed back from three hours of discussions. Any suggestions?

The route map is key. Setting out ambitions and monitoring against the plans. CCC reports are also important.

CCC are looking at things on a huge international level. Report to London could be done by Londoners.

Borough of Haringey reports annually, but is the only borough to do this.

We have no indication of where the businesses are. The route map needs to say what it believes in.